

RF Test Data for BLE (Conducted Measurements)

General Description of EUT	
EUT Name:	TV BOX
Model:	GD2
Sample ID:	HC-C-202408-0094-02-01
Test Standard:	FCC Part 15.247
Environmental Conditions	
Ambient Temperature:	24.0℃
Ambient Humidity:	46%RH
Test Power Supply:	DC 12V
Test Engineer:	Mike Yan
Note: For a more detailed features description, please refer to the report TBR-C-202408-0094-10	

Contents

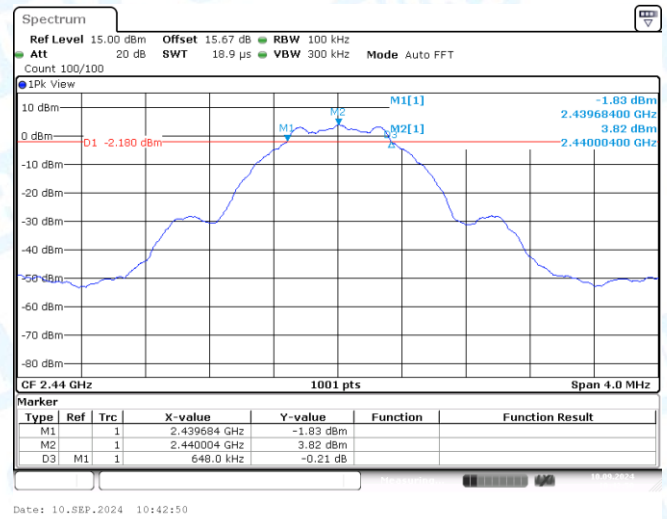
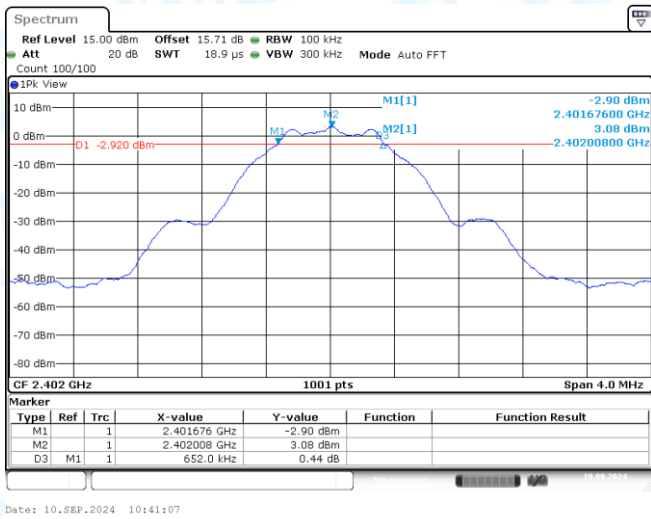
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1: DTS Bandwidth

1.1 Test Result

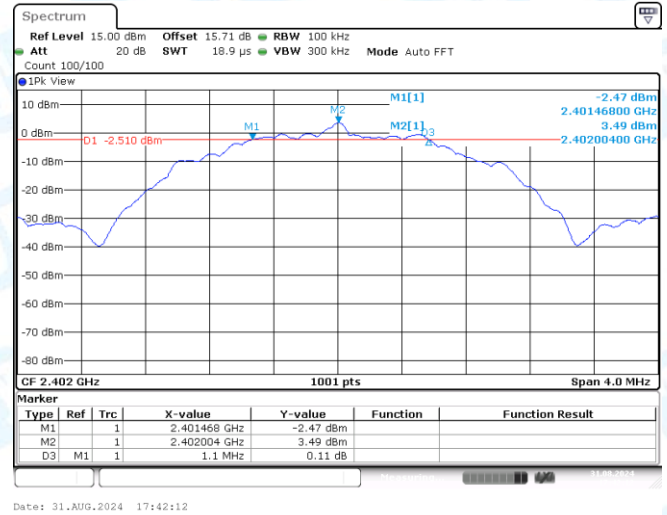
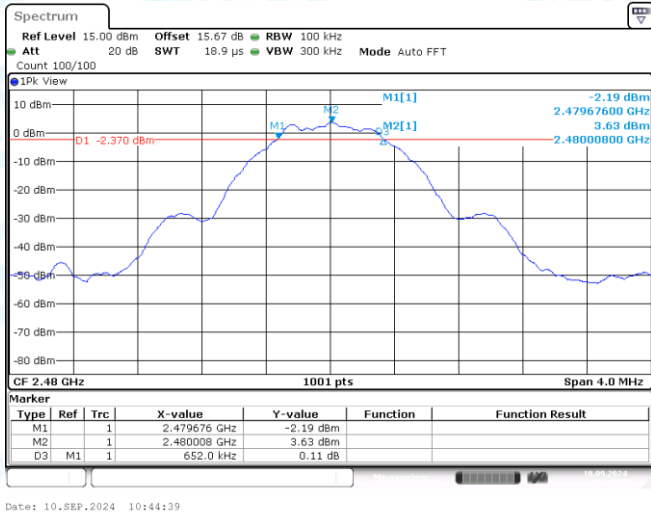
Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.65	2401.68	2402.33	0.5	PASS
BLE_1M	Ant1	2440	0.65	2439.68	2440.33	0.5	PASS
BLE_1M	Ant1	2480	0.65	2479.68	2480.33	0.5	PASS
BLE_2M	Ant1	2402	1.10	2401.47	2402.57	0.5	PASS
BLE_2M	Ant1	2440	0.95	2439.46	2440.41	0.5	PASS
BLE_2M	Ant1	2480	1.10	2479.46	2480.56	0.5	PASS

1.2 Test Graphs



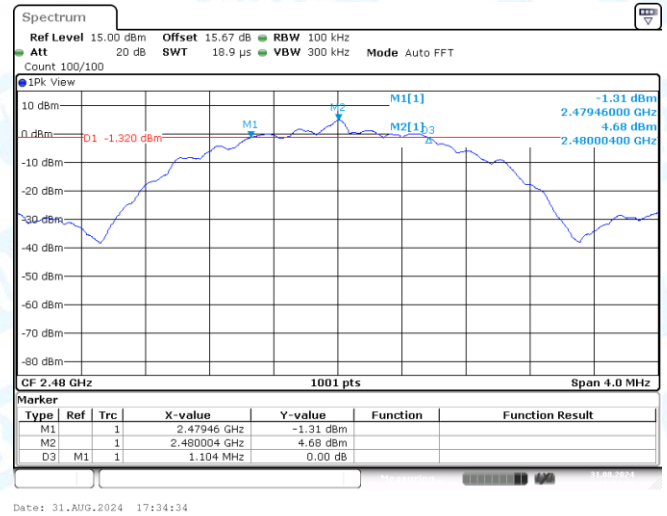
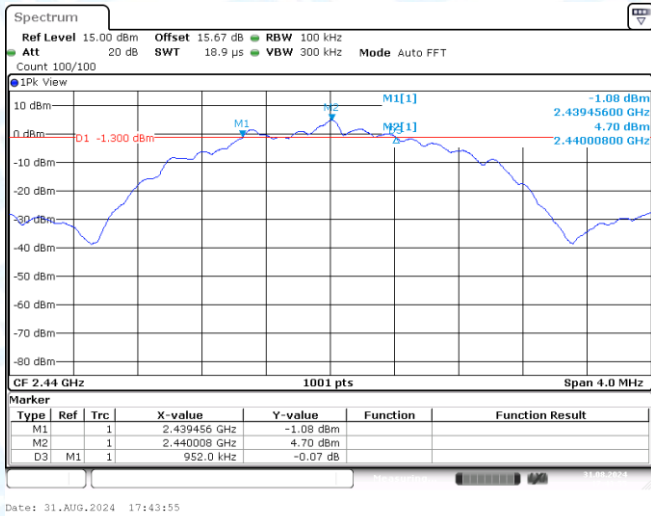
BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2440-PASS



BLE_1M-Ant1-2480-PASS

BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS

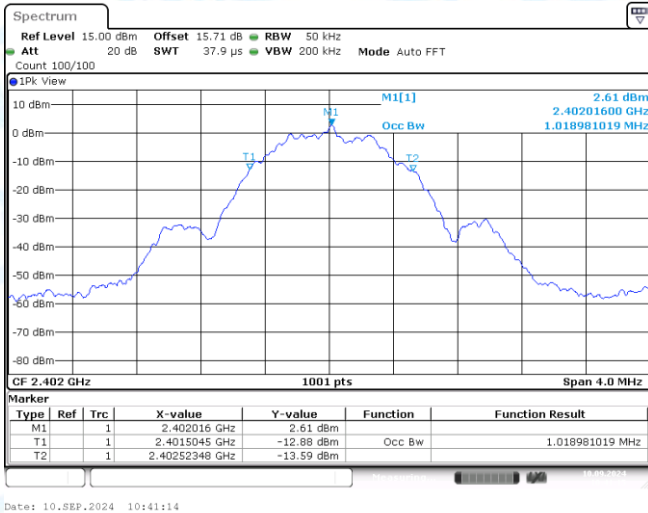
BLE_2M-Ant1-2480-PASS

2: Occupied Channel Bandwidth

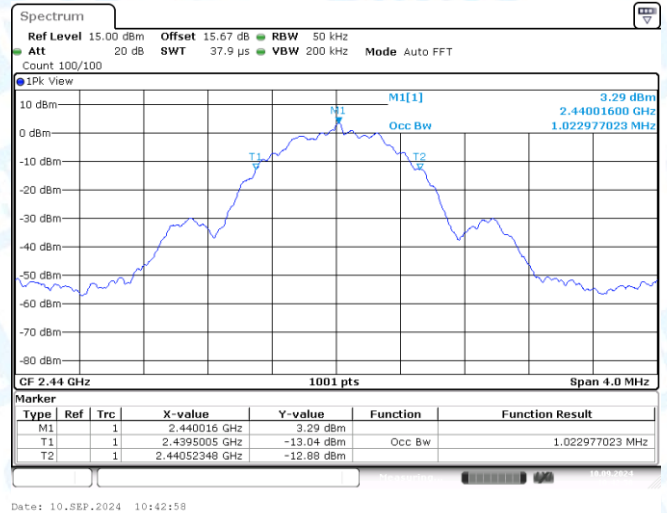
2.1 Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.019	2401.5045	2402.5235	---	---
BLE_1M	Ant1	2440	1.023	2439.5005	2440.5235	---	---
BLE_1M	Ant1	2480	1.023	2479.4965	2480.5195	---	---
BLE_2M	Ant1	2402	2.042	2401.0050	2403.0470	---	---
BLE_2M	Ant1	2440	2.054	2438.9970	2441.0509	---	---
BLE_2M	Ant1	2480	2.054	2478.9970	2481.0509	---	---

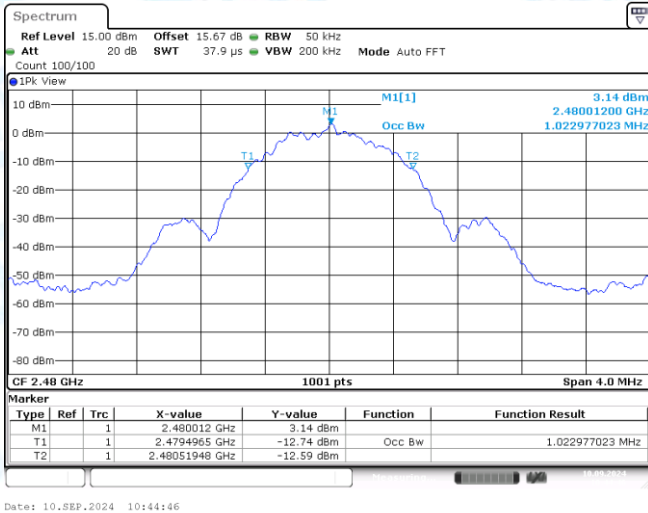
2.2 Test Graphs



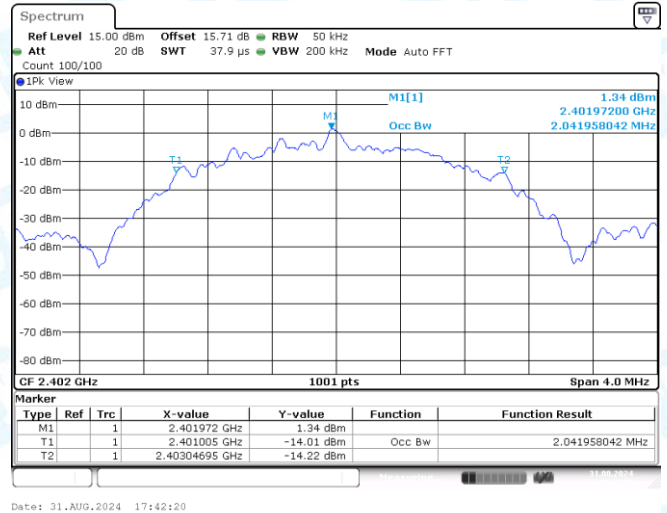
BLE_1M-Ant1-2402



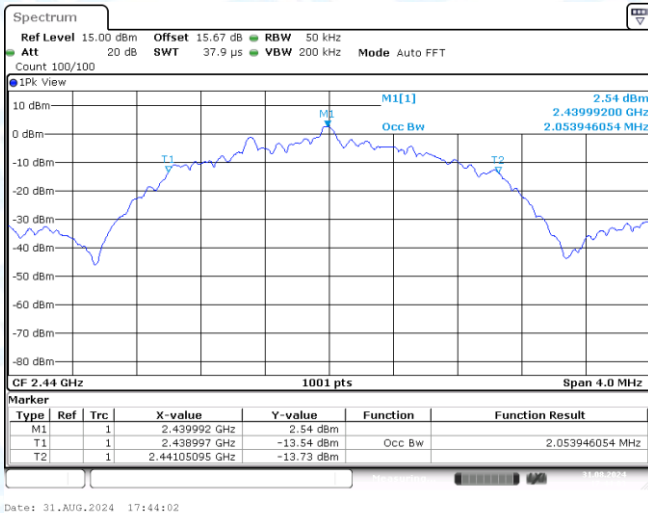
BLE_1M-Ant1-2440



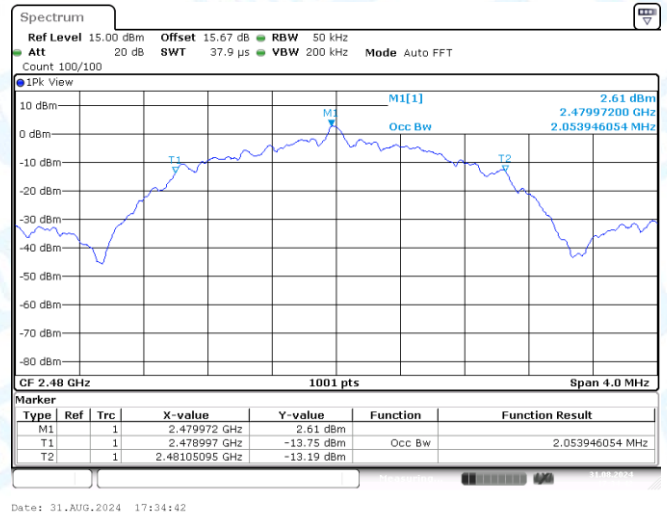
BLE_1M-Ant1-2480



BLE_2M-Ant1-2402



BLE_2M-Ant1-2440



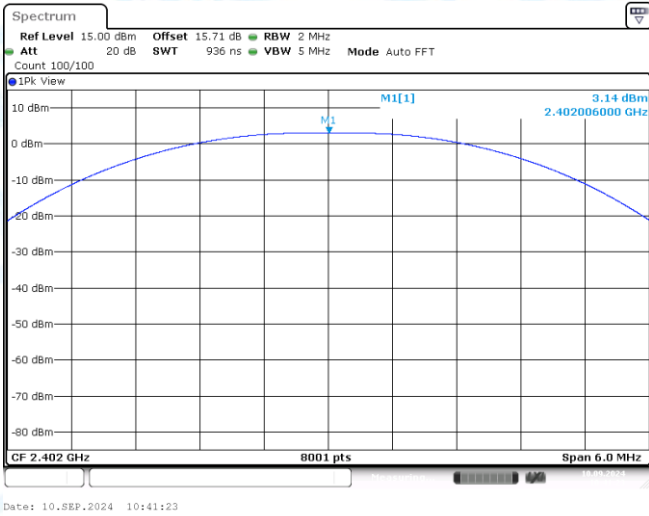
BLE_2M-Ant1-2480

3: Maximum conducted output power

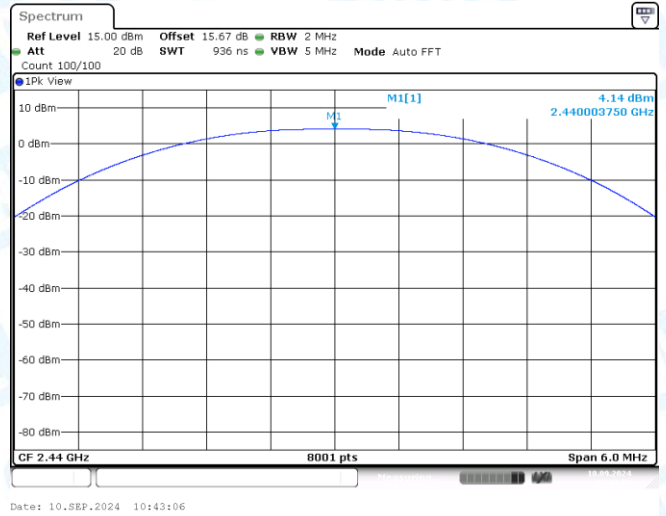
3.1 Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	3.14	≤30	3.11	≤36	PASS
BLE_1M	Ant1	2440	4.14	≤30	4.11	≤36	PASS
BLE_1M	Ant1	2480	3.92	≤30	3.89	≤36	PASS
BLE_2M	Ant1	2402	3.28	≤30	3.25	≤36	PASS
BLE_2M	Ant1	2440	4.62	≤30	4.59	≤36	PASS
BLE_2M	Ant1	2480	4.58	≤30	4.55	≤36	PASS

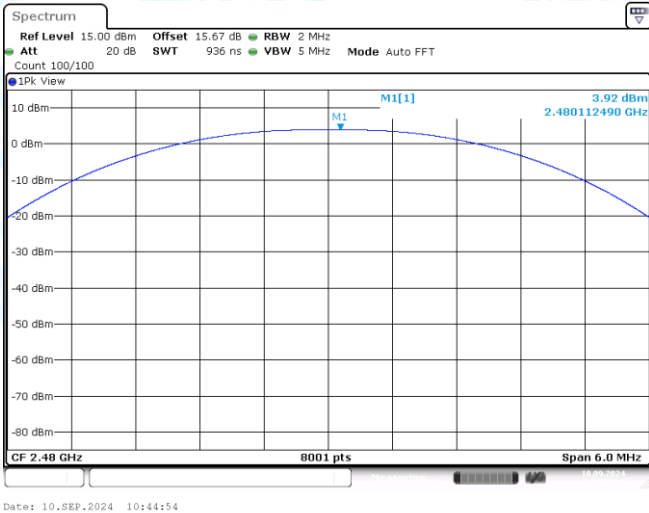
3.2 Test Graphs Peak



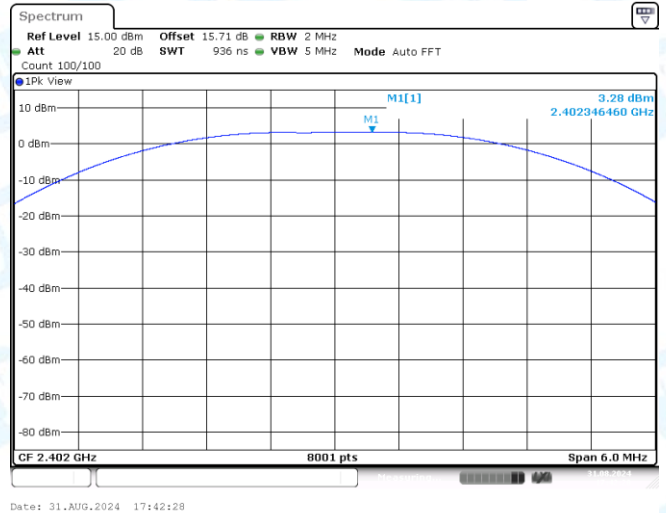
BLE_1M-Ant1-2402-PASS



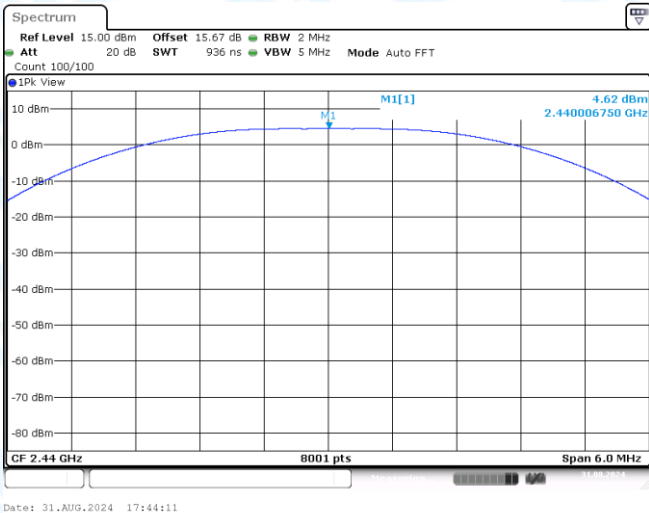
BLE_1M-Ant1-2440-PASS



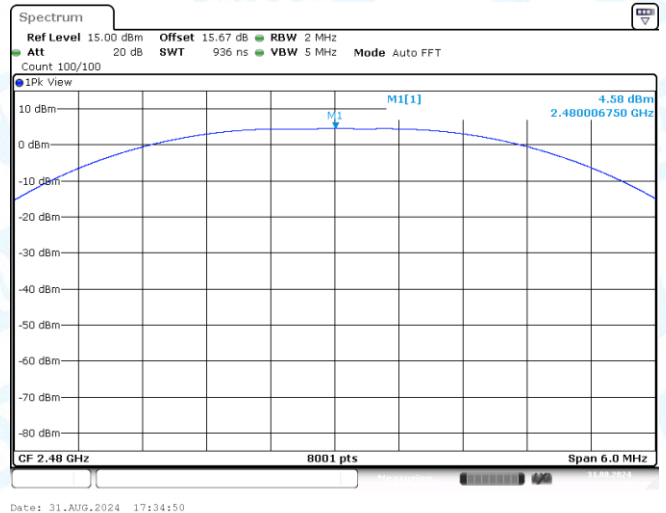
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



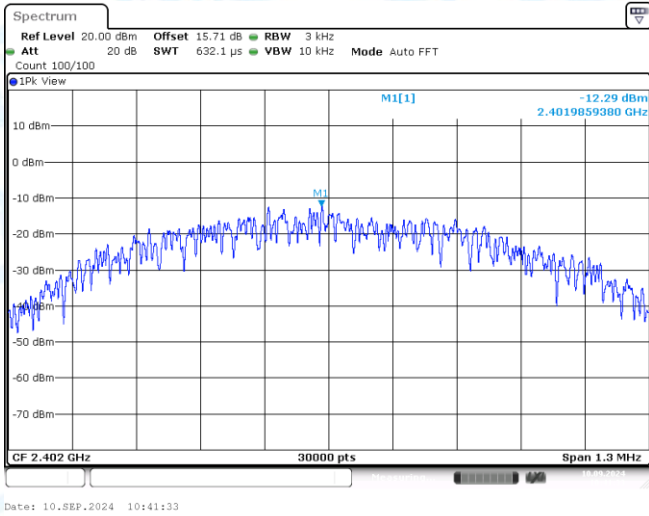
BLE_2M-Ant1-2480-PASS

4: Maximum power spectral density

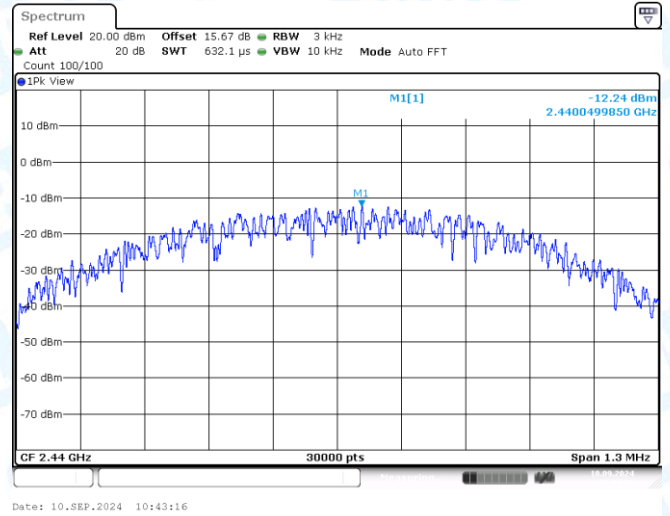
4.1 Test Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-12.29	≤8.00	PASS
BLE_1M	Ant1	2440	-12.24	≤8.00	PASS
BLE_1M	Ant1	2480	-10.80	≤8.00	PASS
BLE_2M	Ant1	2402	-14.78	≤8.00	PASS
BLE_2M	Ant1	2440	-13.68	≤8.00	PASS
BLE_2M	Ant1	2480	-13.49	≤8.00	PASS

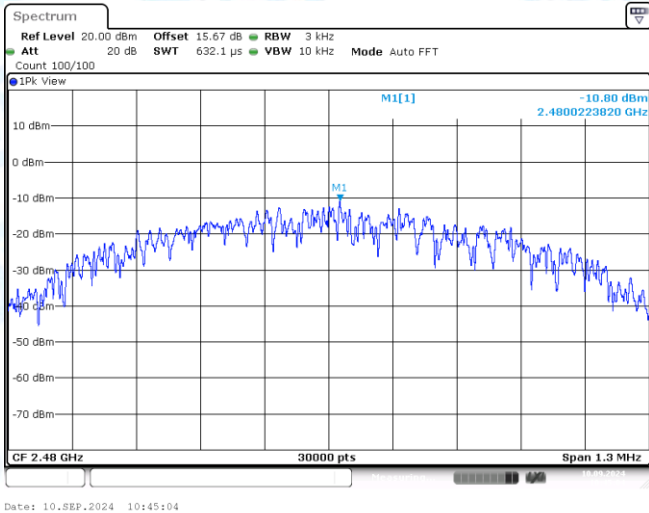
4.2 Test Graphs



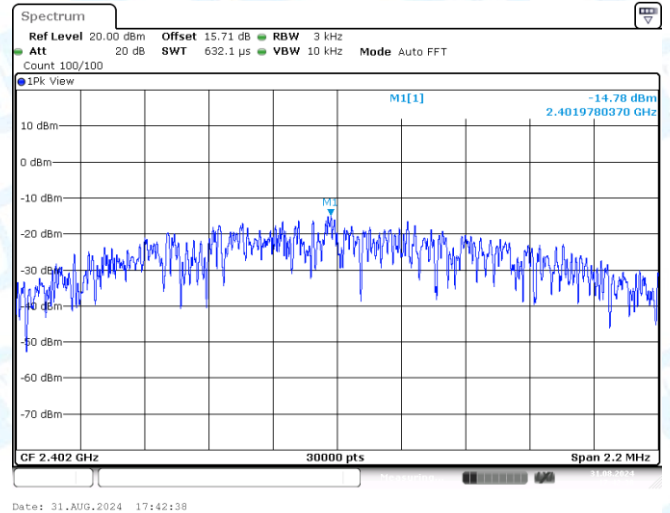
BLE_1M-Ant1-2402-PASS



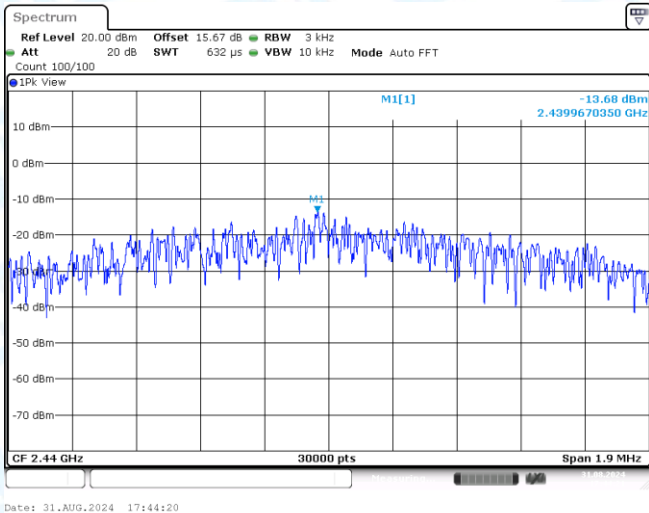
BLE_1M-Ant1-2440-PASS



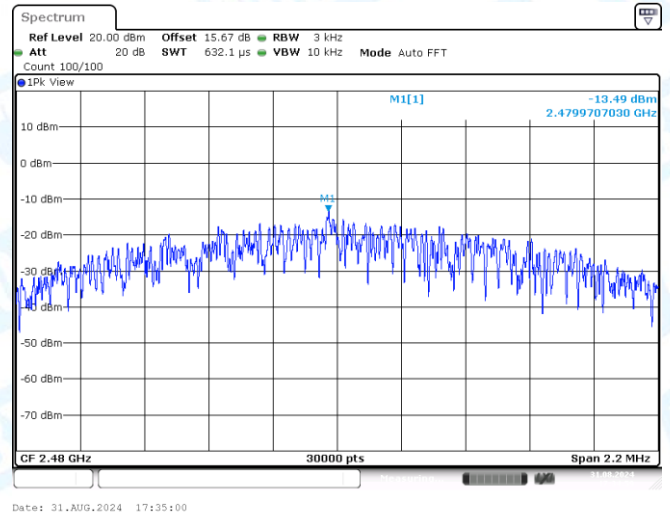
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



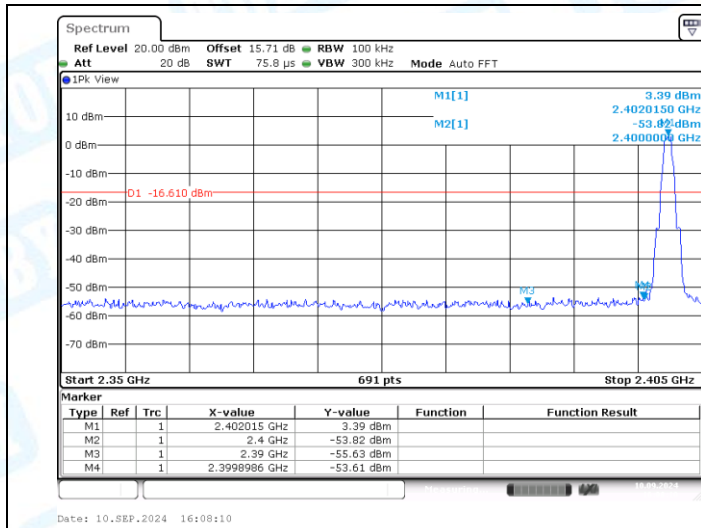
BLE_2M-Ant1-2480-PASS

5: Band edge measurements

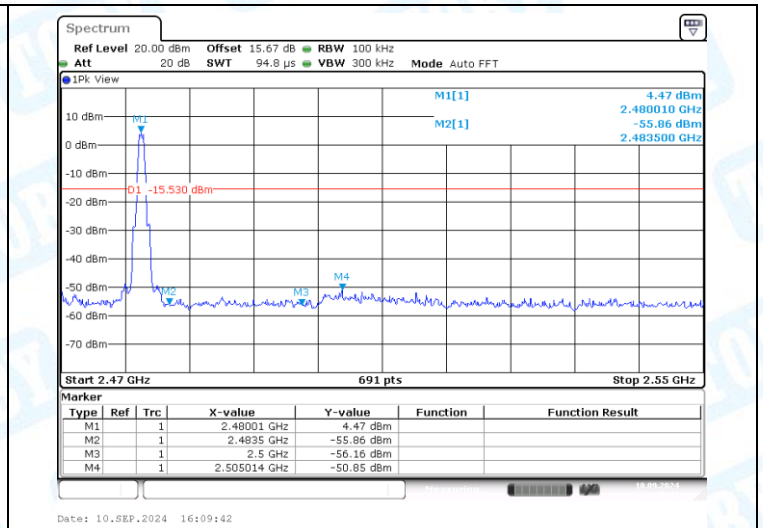
5.1 Test Result

Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	3.39	-53.61	≤-16.61	PASS
BLE_1M	Ant1	High	2480	4.47	-50.85	≤-15.53	PASS
BLE_2M	Ant1	Low	2402	2.91	-30.75	≤-17.09	PASS
BLE_2M	Ant1	High	2480	4.51	-52.26	≤-15.49	PASS

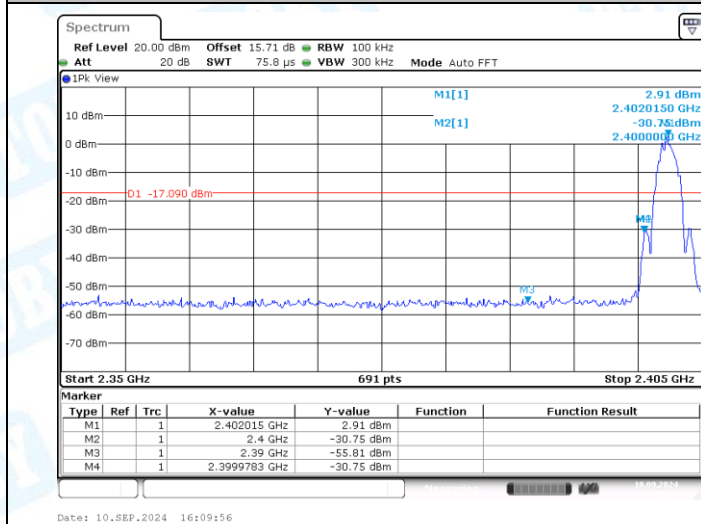
5.2 Test Graphs



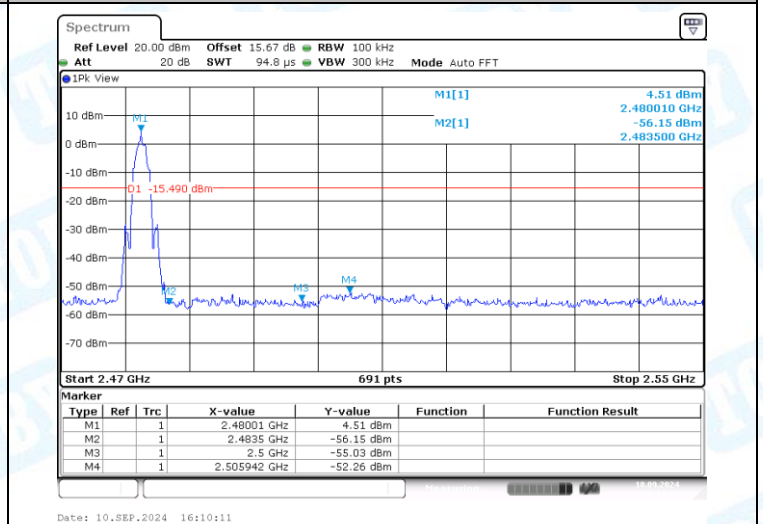
BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



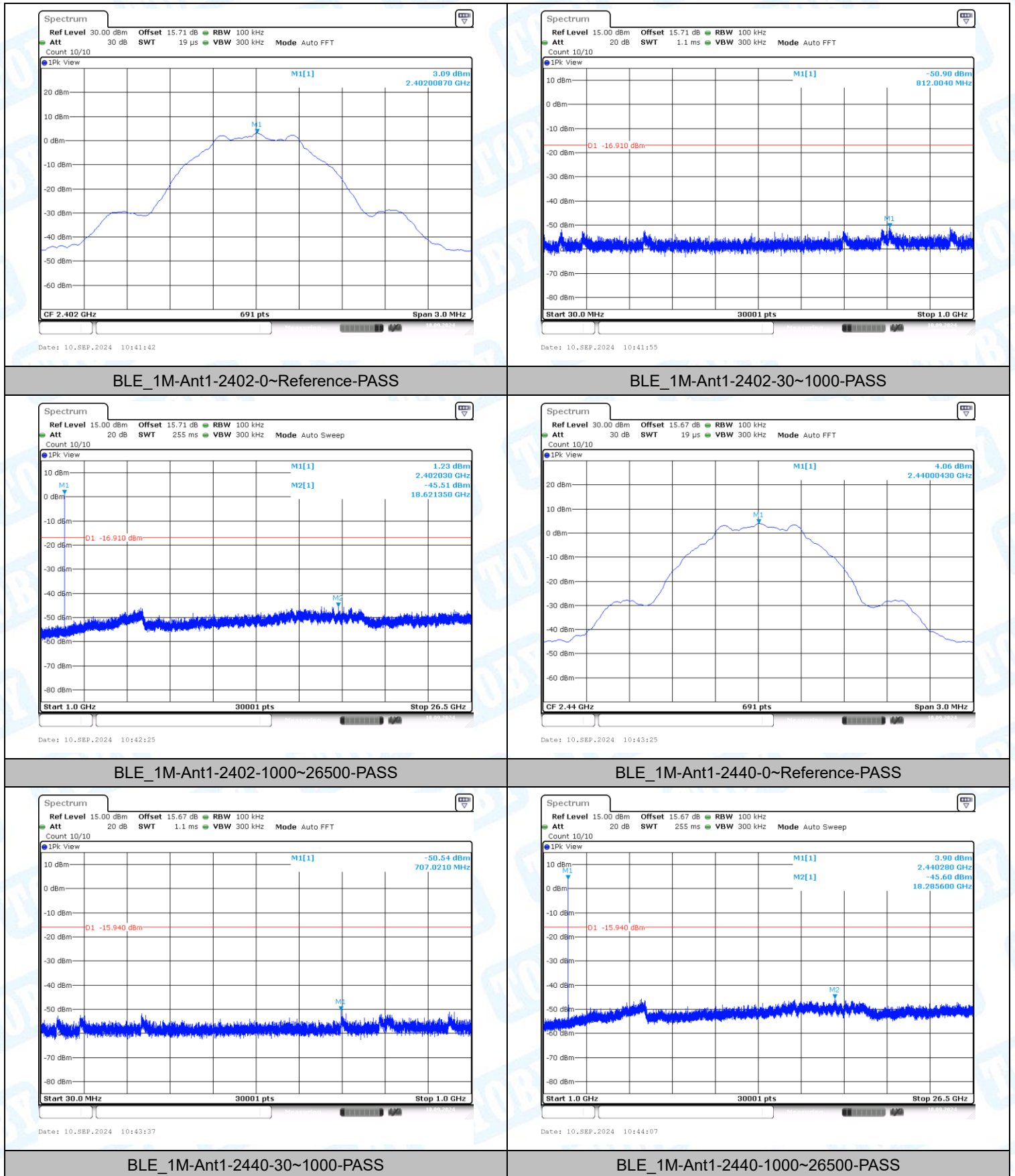
BLE_2M-Ant1-2480-PASS

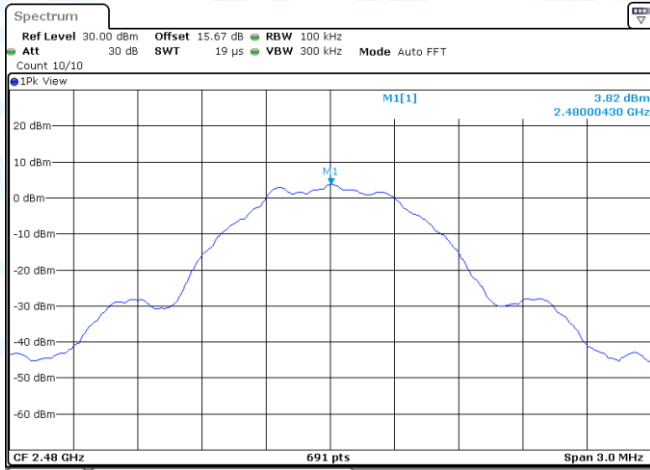
6: Conducted Spurious Emission

6.1 Test Result

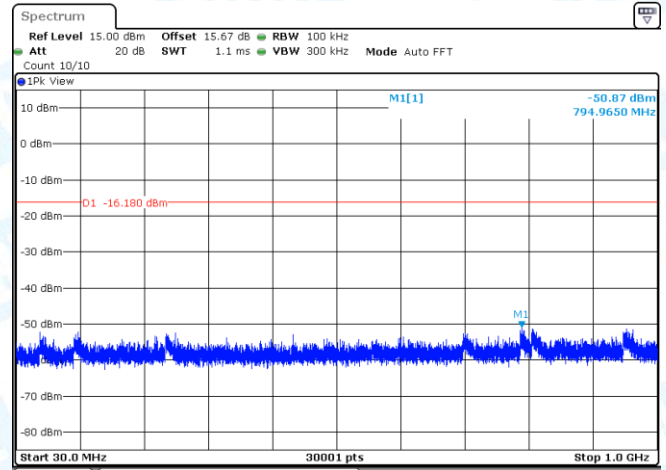
Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	3.09	3.09	---	PASS
BLE_1M	Ant1	2402	30~1000	3.09	-50.9	≤-16.91	PASS
BLE_1M	Ant1	2402	1000~26500	3.09	-45.51	≤-16.91	PASS
BLE_1M	Ant1	2440	0~Reference	4.06	4.06	---	PASS
BLE_1M	Ant1	2440	30~1000	4.06	-50.54	≤-15.94	PASS
BLE_1M	Ant1	2440	1000~26500	4.06	-45.6	≤-15.94	PASS
BLE_1M	Ant1	2480	0~Reference	3.82	3.82	---	PASS
BLE_1M	Ant1	2480	30~1000	3.82	-50.87	≤-16.18	PASS
BLE_1M	Ant1	2480	1000~26500	3.82	-45.3	≤-16.18	PASS
BLE_2M	Ant1	2402	0~Reference	3.67	3.67	---	PASS
BLE_2M	Ant1	2402	30~1000	3.67	-51.46	≤-16.33	PASS
BLE_2M	Ant1	2402	1000~26500	3.67	-44.99	≤-16.33	PASS
BLE_2M	Ant1	2440	0~Reference	4.69	4.69	---	PASS
BLE_2M	Ant1	2440	30~1000	4.69	-51.04	≤-15.31	PASS
BLE_2M	Ant1	2440	1000~26500	4.69	-44.62	≤-15.31	PASS
BLE_2M	Ant1	2480	0~Reference	4.51	4.51	---	PASS
BLE_2M	Ant1	2480	30~1000	4.51	-51.41	≤-15.49	PASS
BLE_2M	Ant1	2480	1000~26500	4.51	-45.24	≤-15.49	PASS

6.2 Test Graphs





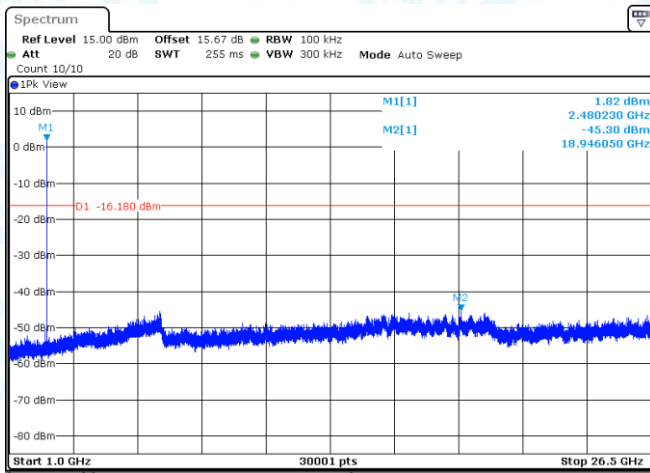
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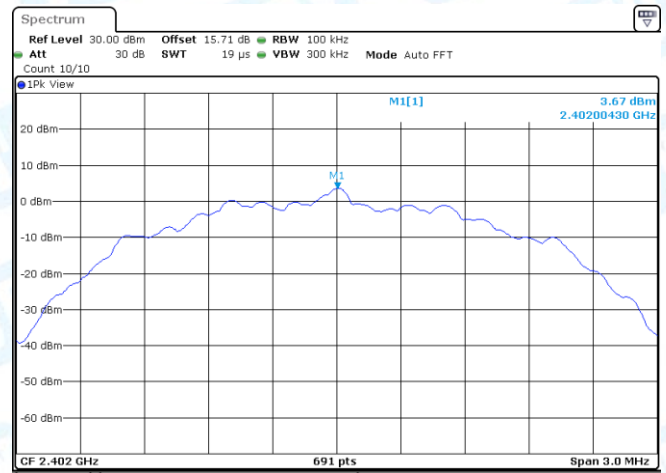
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BLE_1M-Ant1-2480-0~Reference-PASS

BLE_1M-Ant1-2480-30~1000-PASS



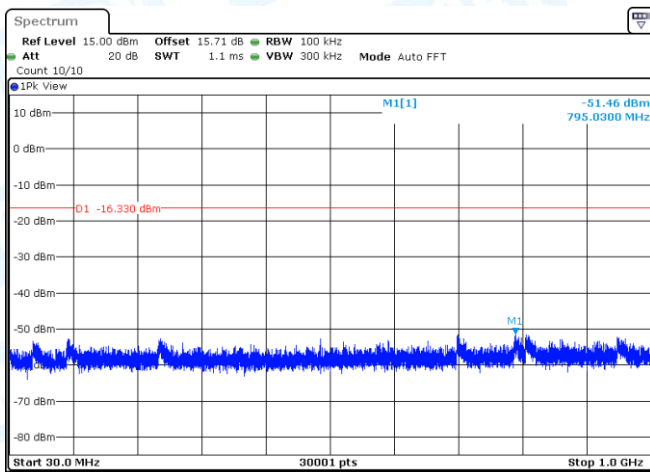
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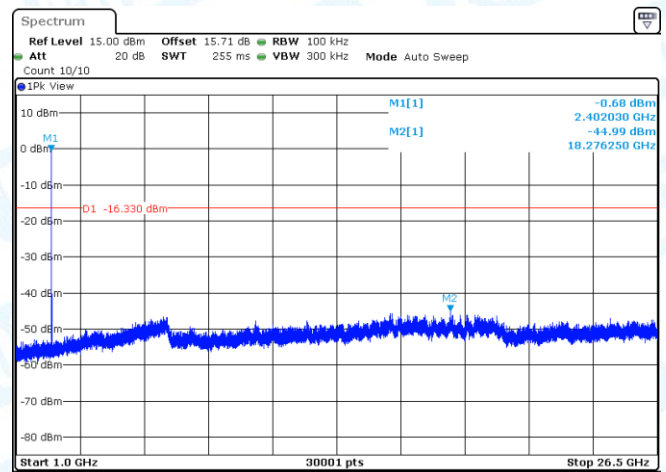
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BLE_1M-Ant1-2480-1000~26500-PASS

BLE_2M-Ant1-2402-0~Reference-PASS



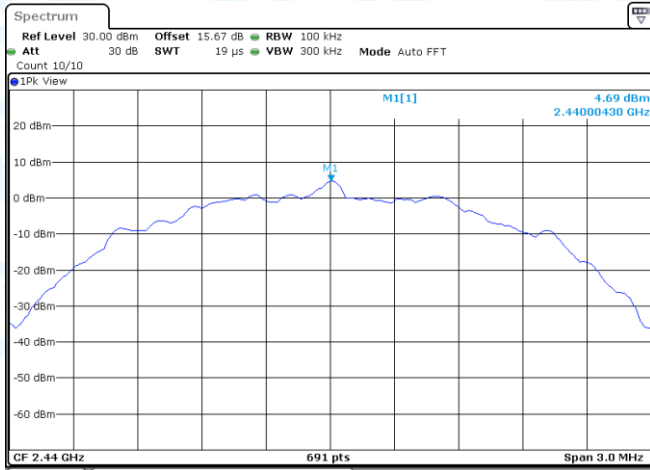
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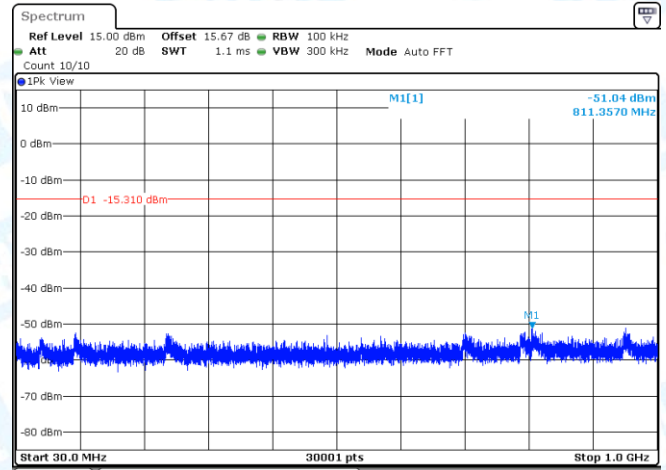
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BLE_2M-Ant1-2402-30~1000-PASS

BLE_2M-Ant1-2402-1000~26500-PASS



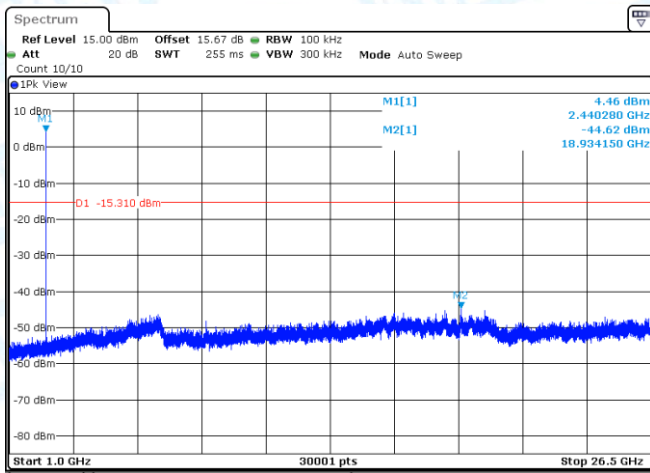
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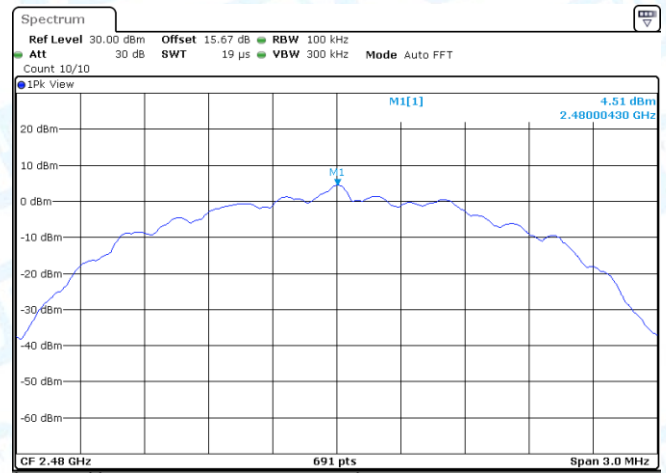
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BLE_2M-Ant1-2440-0~Reference-PASS

BLE_2M-Ant1-2440-30~1000-PASS



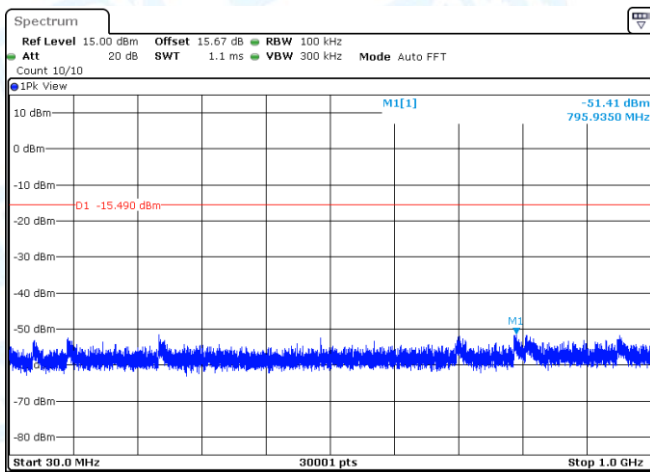
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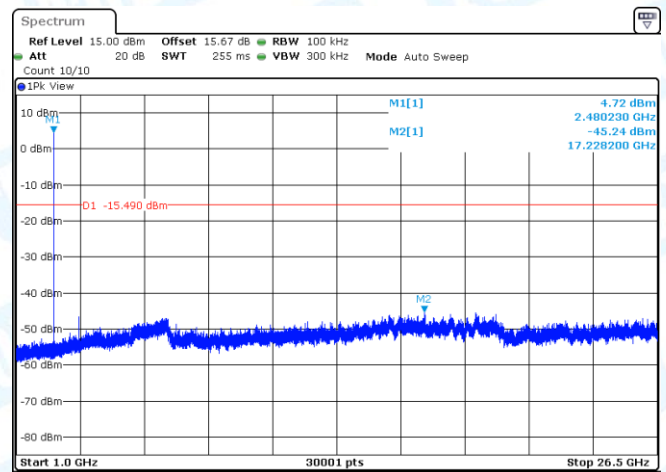
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BLE_2M-Ant1-2440-1000~26500-PASS

BLE_2M-Ant1-2480-0~Reference-PASS



Date: 31.AUG.2024 17:35:22



Date: 31.AUG.2024 17:35:52

BLE_2M-Ant1-2480-30~1000-PASS

BLE_2M-Ant1-2480-1000~26500-PASS

7: Duty Cycle

7.1 Test Result

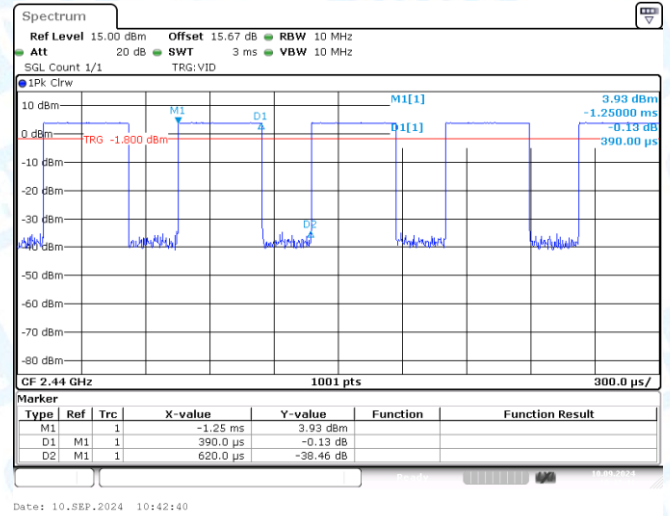
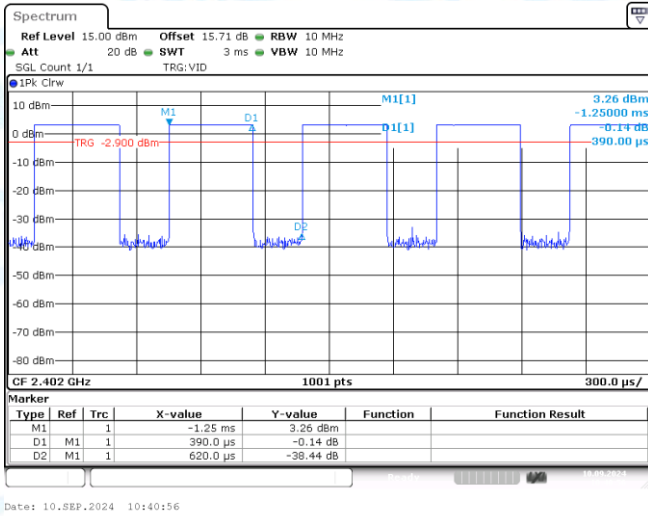
TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factory	1/T [kHz]
BLE_1M	Ant1	2402	0.39	0.62	62.90	2.01	2.56
BLE_1M	Ant1	2440	0.39	0.62	62.90	2.01	2.56
BLE_1M	Ant1	2480	0.39	0.62	62.90	2.01	2.56
BLE_2M	Ant1	2402	0.21	0.62	33.87	4.70	4.76
BLE_2M	Ant1	2440	0.21	0.62	33.87	4.70	4.76
BLE_2M	Ant1	2480	0.21	0.62	33.87	4.70	4.76

Note: 1, Duty Cycle= Transmission Duration/ Transmission Period

2, DC Factory=10*Log₁₀(1/Duty Cycle)

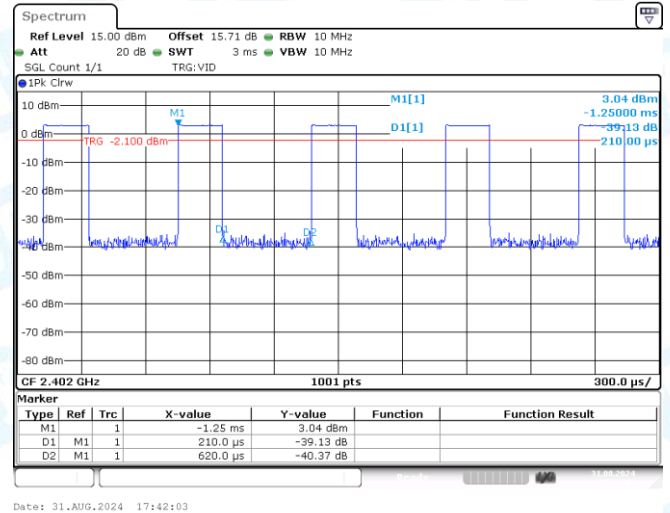
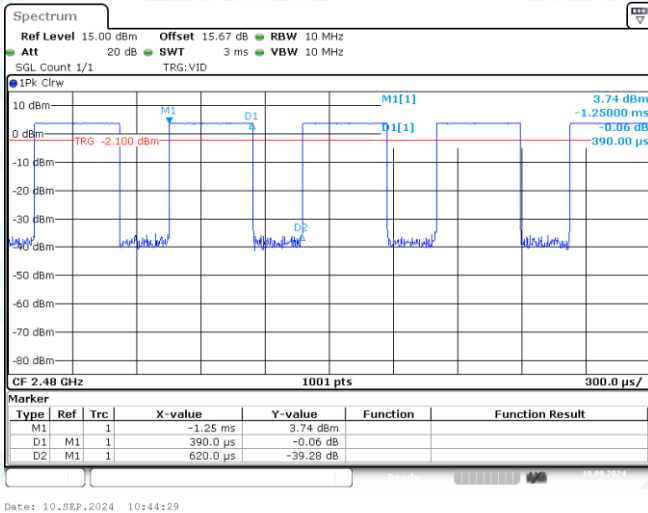
3, 1/T=1/ Transmission Duration

7.2 Test Graphs



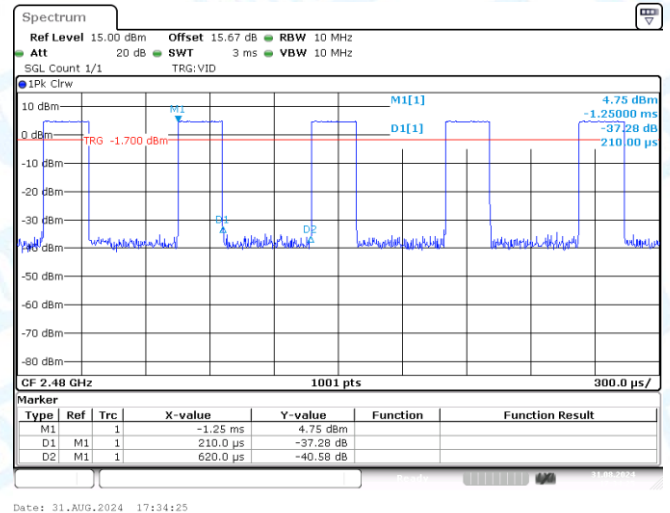
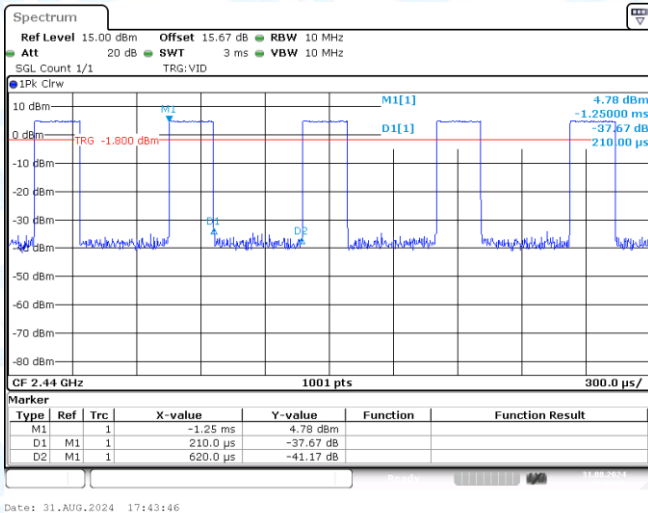
NTNV-BLE_1M-Ant1-2402

NTNV-BLE_1M-Ant1-2440



NTNV-BLE_1M-Ant1-2480

NTNV-BLE_2M-Ant1-2402



NTNV-BLE_2M-Ant1-2440

NTNV-BLE_2M-Ant1-2480

-----END OF THE REPORT-----